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EXAMINER	
LAM, VINH TANG	

ART UNIT	PAPER NUMBER
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/560,701	BINSTEAD, RONALD P.	
	Examiner	Art Unit	
	VINH LAM	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) *2 and 3* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/20/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim **1** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim **1** recites the limitation "…***the plane***…" in *"…across* ***the plane*** *of a supporting medium…"*. There is insufficient antecedent basis for this limitation in the claim. The Examiner interprets *"…across* ***the plane*** *of a supporting medium…"* as *"…across* ***a plane*** *of a supporting medium…"*.

Claim **1** recites the limitation "…***said conductors***…" in *"…each of* ***said conductors*** *being sensitive…"*. There is insufficient antecedent basis for this limitation in the claim. The Examiner interprets *"…each of* ***said conductors*** *being sensitive…"* as *"…each of* ***said spaced apart conductors*** *being sensitive…"*.

Claim **1** recites the limitation "…***the proximity***…" in *"…****the proximity*** *of a finger…"*. There is insufficient antecedent basis for this limitation in the claim. The Examiner interprets *"…****the proximity*** *of a finger…"* as *"…****a proximity*** *of a finger…"*

Claim **1** recites the limitation "…***said conductor***…" in *"…close to* ***said conductor****…"*. There is insufficient antecedent basis for this limitation in the claim. The Examiner interprets *"…close to* ***said conductor****…"* as *"…close to* ***said spaced apart conductor****…"*.

Claim **1** recites the limitation "…***the electric field***…" in *"…concentrate* ***the electric field****…".* There is insufficient antecedent basis for this limitation in the claim. The Examiner interprets *"…concentrate* ***the electric field****…"* as *"…"…concentrate* ***an electric field****…".*

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims **1, 4-14, 20, 35, 39-40, & 45** are rejected under 35 U.S.C. 102(b) as being anticipated by **Yoshikawa et al. (US PGPub. 2003/0231170).**

Regarding Claim **1**, (Currently Amended) **Yoshikawa et al.** teach a touchpad *([**0051**], FIG. **1**, i.e. digitizing tablet **1**)* comprising a plurality of spaced apart conductors *([**0051**], FIG. **1**, i.e. row electrodes **7**)* located across the plane of a supporting medium *([**0051**], FIG. **1**, i.e. support substrate **4**)* and an electrically conductive medium *([**0051**], FIG. **1**, i.e. column electrodes **6**)* located in a plane *([**0051**], FIG. **1**, i.e. insulating sheet **8**)* that is substantially parallel to the plane of the supporting medium *([**0051**], FIG. **1**, i.e. **4 // 8**)*, wherein said supporting medium *([**0051**], FIG. **1**, i.e. support substrate **4**)* supports said plurality of spaced apart conductors *([**0051**], FIG. **1**, i.e. row electrodes **7**)* wherein there is no electrical contact between ~~the~~ said plurality of

spaced apart conductors *([**0051**], FIG. **1**, i.e. since each of row electrodes **7** being parallel to others)*, each of said conductors being sensitive to the proximity *([**0056**], FIG. **1**, i.e. electrodes **7** to couple)* of a finger *([**0056**], FIG. **1**, i.e. stylus pen **9**; or [**0024**], i.e. **finger**)* to modify the capacitance of said conductor *([**0056**], FIG. **1**, i.e. **capacitive dielectric**)* to detect the presence of the finger positioned close to said conductor *([**0056**], FIG. **1**, i.e. stylus pen **9** … near …electrodes **7** to couple)*, said electrically conductive medium being proximal to said plurality of spaced apart conductors *([**0051**], FIG. **1**, i.e. electrodes **6** and **7** formed on opposing surfaces of **3** and **4**)* to concentrate the electric field between said plurality of spaced apart conductors towards the plane of said supporting medium *([**0055**], [**0056**], FIG. **1**, i.e. voltage pulses and capacitive dielectric would inherently produce an electric field)* and adapted to locally modify the capacitive environment between a subset of said plurality of spaced apart conductors *([**0056**], FIG. **1**, i.e. capacitive dielectric)* without distortion of said conductive medium *([**0055**], [**0056**], FIG. **1**, i.e. the thickness of electrodes **6** does not change but insulating sheet **8**)*.

Regarding Claim **4**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 1, wherein said electrically conductive medium is adapted to accentuate the variation in capacitance of a conductor and to control the dispersion of a resulting capacitive signal propagating from substantially the proximity of the finger *([**0056**], FIG. **1**)*.

Regarding Claim **5**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 1, wherein said supporting medium is electrically insulating *([**0056**], FIG. **1**)*.

Regarding Claim **6**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 1, wherein said conductive medium is in the form of a conductive layer covering at least a portion of said supporting medium *([**0056**], FIG. **1**)*.

Regarding Claim **7**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 6, wherein said conductive layer is discontinuous *([**0056**], FIG. **1**)*.

Regarding Claim **8**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 6, wherein said conductive layer is selectively supported by a first surface of said supporting medium or a first surface of a dielectric medium *([**0054**], [**0056**], FIG. **1**, i.e. panel **3**)*.

Regarding Claim **9**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 8, wherein said dielectric medium has a thickness which is relatively large as compared to the thickness of said conductive layer *([**0056**], FIG. **1**)*.

Regarding Claim **10**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 6, further comprising a non-conductive layer proximate to said conductive layer *([**0056**], FIG. **1**)*.

Regarding Claim **11**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 8, wherein said supporting medium and said conductive layer are separated by said dielectric medium *([**0054**], [**0056**], FIG. **1**, i.e. panel **3**)*.

Regarding Claim **12**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 8, wherein said conductive layer is sandwiched between said supporting medium and said dielectric medium *([**0054**], [**0056**], FIG. **1**, i.e. panel **3**)*.

Regarding Claim **13**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 8, wherein said supporting medium is sandwiched between said conductive layer and said dielectric medium *([**0056**], FIG. **1**)*.

Regarding Claim **14**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 8, comprising a further conductive layer proximate to said dielectric medium and sandwiching said dielectric medium between said further conductive layer and said conductive layer *([**0056**], FIG. **1**)*.

Regarding Claim **20**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 14, wherein said further conductive layer is supported by a second surface of said dielectric medium, said second surface being in substantially opposed relation to said first surface of said dielectric medium *([**0056**], Fig. **1**).*

Regarding Claim **35**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 1, wherein said plurality of conductors are each electrically insulated *([**0054**], Fig. **1**, i.e. **8**).*

Regarding Claim **39**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 1, wherein said touchpad is resilient *([**0054**], Fig. **1**).*

Regarding Claim **40**, (Currently Amended) the touchpad as claimed in claim 1, wherein said touchpad is deformable *([**0054**], Fig. **1**).*

Regarding Claim **45**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 1 wherein said plurality of conductors comprises a first series of spaced-apart conductors and a second series of spaced apart conductors disposed in intersecting relation *([**0056**], FIG. **1**)*.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims **15**, **28-34**, **36-37**, and **41** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Tanaka et al. (US PGPub. 2004/0017364).**

Regarding Claim **15**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 1.

However, **Yoshikawa et al.** do not teach the conductive medium has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square.

In the same field of endeavor, **Tanaka et al.** teach the conductive medium has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square *([**0320**])*.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of touchpad structures with **Tanaka et al.** teaching of the conductive medium has a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square *to improve accuracy of a pointing object detection.*

Regarding Claim **28**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 1.

However, **Yoshikawa et al.** do not teach said supporting medium and said conductive medium are formed as a single conductive support and sensing layer.

In the same field of endeavor, **Tanaka et al.** teach said supporting medium and said conductive medium are formed as a single conductive support and sensing layer *([**0318**]).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of touchpad structures with **Tanaka et al.** teaching of said supporting medium and said conductive medium are formed as a single conductive support and sensing layer *to reduce parts and manufacturing process*.

Regarding Claim **29**, (Currently Amended) the touchpad as claimed in claim 28, wherein **Tanaka et al.** teach said single conductive support and sensing layer is formed from a bulk doped medium having a bulk conductivity *([**0318**]).*

Regarding Claim **30**, (Currently Amended) the touchpad as claimed in claim 29, wherein **Tanaka et al.** teach said bulk doped medium is glass or plastic comprising a dopant of conductive material *([**0340**]).*

Regarding Claim **31**, (Currently Amended) the touchpad as claimed in claim 30, wherein **Tanaka et al.** teach said conductive material is selectively particulate or fibrous *([**0321**])*.

Regarding Claim **32**, (Currently Amended) the touchpad as claimed in claim 31, wherein said particulates may be selectively formed from metal or metal oxides with a size up to 10 microns wide is an obvious *Choice of Design*.

Regarding Claim **33**, (Currently Amended) the touchpad as claimed in claim 31, wherein said the fibrous material may be selectively formed from nanotubes or carbon fibers with a length up to 10 millimeters is an obvious *Choice of Design*.

Regarding Claim **34**, (Currently Amended) the touchpad as claimed in claim 28, wherein **Tanaka et al.** teach said plurality of conductors are substantially contained within said single conductive support and sensing layer *([**0318**])*.

Regarding Claim **36**, (Currently Amended) the touchpad as claimed in claim 35, wherein **Tanaka et al.** teach each conductor of said plurality of conductors is coated with an electrically insulating sheath ([**0006**]).

Regarding Claim **37**, (Currently Amended) the touchpad as claimed in claim 28, wherein said conductive support and sensing layer has a textured surface in the form of surface distortions for the redirection of a point of touch which is an obvious *Choice of Design*.

Regarding Claim **41**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 1.

However, **Yoshikawa et al.** do not teach said conducting medium is selectively Indium Tin Oxide (ITO) or Antimony Tin Oxide (ATO).

In the same field of endeavor, **Tanaka et al.** teach said conducting medium is selectively Indium Tin Oxide (ITO) or Antimony Tin Oxide (ATO) *(Col. **30**, **[0340]**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of touchpad structures with **Tanaka et al.** teaching of the conducting medium is Indium Tin Oxide (ITO) or Antimony Tin Oxide (ATO) *to* reduce cost.

4. Claims **16**-**19**, **21**-**27**, and **38** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Vranish (US PGPub. 2002/0000977).**

Regarding Claim **16**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in Claim 1.

However, **Yoshikawa et al.** do not teach the conductive medium electrically floats or is grounded to earth.

In the same field of endeavor, **Vranish** teaches said conductive medium electrically floats or is grounded to earth *(**[0031]**, Fig. **3**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of touchpad structures with **Vranish** teaching of the conductive medium electrically floats or is grounded to earth to reduce background noise and electromagnetic interference.

Regarding Claim **17**, (Currently Amended) **Vranish** teaches the touchpad as claimed in claim 16, wherein said conductive medium is selectively grounded by a wire or a resistor *([**0031**], Fig. **3**).*

Regarding Claim **18**, (Currently Amended) **Yoshikawa et al.** each the touchpad as claimed in claim 6.

However, **Yoshikawa et al.** do not teach the conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of a first surface of said supporting medium or first surface of said dielectric medium.

In the same field of endeavor, **Vranish** teaches a plurality of electrically isolated conductive regions selectively separated by regions of a first surface of said supporting medium or first surface of said dielectric medium *([**0031**], Figs. **2** & **3**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of touchpad structures with **Vranish** teaching the conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of a first surface of said supporting medium or first surface of said dielectric medium *to apply the technology not only to a touchpad but also to a keypad.*

Regarding Claim **19**, (Currently Amended) the touchpad as claimed in claim 18, wherein **Vranish** teaches the separations between said t-he conductive regions are relatively small compared to the width of said conductive regions, so as to selectively allow capacitive coupling of adjacent regions via said t-he supporting medium or said dielectric medium *([**0031**], Figs. **2** & **3**).*

Regarding Claim **21**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 20.

However, **Yoshikawa et al.** do not teach wherein said further conductive layer comprises a plurality of electrically isolated conductive regions separated by regions of said second surface of said dielectric medium.

In the same field of endeavor, **Vranish** teaches wherein said further conductive layer comprises a plurality of electrically isolated conductive regions separated by regions of said second surface of said dielectric medium *([**0031**], Figs. **2** & **3**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of touchpad structures with **Vranish** teaching of said further conductive layer comprises a plurality of electrically isolated conductive regions separated by regions of said second surface of said dielectric medium *to correspondingly adapt to the keypad design*.

Regarding Claim **22**, (Currently Amended) the touchpad as claimed in claim 21, wherein **Vranish** teaches said conductive regions on said first surface of said dielectric medium and said conductive regions on said second surface of said dielectric

medium are registered to each other by virtue of corresponding substantially coterminous areas *([**0031**], Figs. **2** & **3**).*

Regarding Claim **23**, (Currently Amended) the touchpad as claimed in claim 21, wherein said conductive regions on said first surface of said dielectric medium and said conductive regions on said second surface of said dielectric medium are registered to each other by virtue of corresponding overlapping non-coterminous areas which is an obvious *Choice of Design* disclosed by applicant's disclosure *([**0094**], [**0095**])*.

Regarding Claim **24**, (Currently Amended) the touchpad as claimed in claim 22, wherein **Vranish** teaches said registered regions are capacitively coupled via said dielectric medium *([**0045**], Table **1**).*

Regarding Claim **25**, (Currently Amended) the touchpad as claimed in claim 18, wherein **Vranish** teaches said conductive regions are substantially rectangular *(Fig. **2**).*

Regarding Claim **26**, (Currently Amended) **Yoshikawa et al.** teach the touchpad as claimed in claim 8.

However, **Yoshikawa et al.** do not teach said conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of said first surface of said supporting medium or said first surface of said dielectric medium, each conductive region of said plurality of conductive regions being linked by one or more conductive bridges to adjacent conductive regions, said conductive bridges having a width substantially smaller than the width of said conductive regions.

In the same field of endeavor, **Vranish** teaches said conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of said first surface of said supporting medium or said first surface of said dielectric medium, each conductive region of said plurality of conductive regions being linked by one or more conductive bridges to adjacent conductive regions, said conductive bridges having a width substantially smaller than the width of said conductive regions *([**0047**], Fig. **6**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of touchpad structures with **Vranish** teaching of said conductive layer comprises a plurality of electrically isolated conductive regions selectively separated by regions of said first surface of said supporting medium or said first surface of said dielectric medium, each conductive region of said plurality of conductive regions being linked by one or more conductive bridges to adjacent conductive regions, said conductive bridges having a width substantially smaller than the width of said conductive regions *to adjust the resistivity to a desired specification.*

Regarding Claim **27**, (Currently Amended) the touchpad as claimed in claim 26, wherein **Vranish** teaches said conductive regions have a relatively large thickness and said conductive bridges have a relatively small thickness to increase the resistance in said conductive layer *([**0047**], Fig. **6**).*

Regarding Claim **38**, (Currently Amended) **Yoshikawa et al.** the touchpad as claimed in claim 1.

However, **Yoshikawa et al.** do not teach said touchpad is arranged into a non-planar configuration.

In the same field of endeavor, **Vranish** teaches said touchpad is arranged into a non-planar configuration (Fig. **4**).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of touchpad structures with **Vranish** teaching of said touchpad is arranged into a non-planar configuration *to apply the technology not only to a touchpad but also to other input devices.*

5. Claims **42** and **44** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Lin et al. (US Patent No. 6954868).**

Regarding Claim **42**, (Currently Amended) **Yoshikawa et al.** teach a touchpad system including a touchpad as claimed in claim 1.

However, **Yoshikawa et al.** do not teach a sensing circuit comprising a touch detector circuit and a wake up circuit, said sensing circuit periodically sleeping and waking to measure the state of said touchpad, wherein in response to a touch, said sensing circuit wakes up, if sleeping, and scans the surface to determine the touch position.

In the same field of endeavor, **Lin et al.** teach a sensing circuit comprising a touch detector circuit and a wake up circuit, said sensing circuit periodically sleeping and waking to measure the state of said touchpad, wherein in response to a touch, said

sensing circuit wakes up, if sleeping, and scans the surface to determine the touch position *(Col. **8**, Ln. **1**-**28**, Fig. **4**).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** teaching of touchpad structures with **Lin et al.** teaching of a sensing circuit comprising a touch detector circuit and a wake up circuit, said sensing circuit periodically sleeping and waking to measure the state of said touchpad, wherein in response to a touch, said sensing circuit wakes up, if sleeping, and scans the surface to determine the touch position *to reduce the power consumption utilizing sleep and wake up states.*

Regarding Claim **44**, (Currently Amended) the touchpad system as claimed in claim 42, wherein the power consumption of said sensing circuit is less than about 10 microamps when sleeping is an obvious Choice of Design.

6. Claim **43** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshikawa et al. (US PGPub. 2003/0231170)** in view of **Lin et al. (US Patent No. 6954868)** and further in view of **Files et al. (US Patent No. 5657053).**

Regarding Claim **43**, (Original) **Yoshikawa et al.** and **Lin et al.** teach the touchpad system as claimed in claim 42.

However, **Yoshikawa et al.** and **Lin et al.** do not teach the touch is detected in less than about 3 microseconds.

In the same field of endeavor, **Files et al.** teach the touch is detected in less than about 3 microseconds.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine **Yoshikawa et al.** and **Lin et al.** teaching of touchpad structures, detection circuit for sleeping and awaking modes with **Files et al.** teaching of the touch is detected in less than about 3 microseconds *in order to benefit of quickly responding and deactivating when touch being detected*.

Response to Arguments/Amendments/Remarks

7. Applicant's arguments with respect to claims 1-45 have been considered but are moot in view of the new ground(s) of rejection.

8. Claims **2** - **3** are cancelled.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH T. LAM whose telephone number is (571)270-3704. The examiner can normally be reached on M-F (7:00-4:30) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571) 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vinh T Lam/
Examiner, Art Unit 2629

/Amare Mengistu/
Supervisory Patent Examiner, Art Unit 2629